SALMON CREEK PROJECT EIS

EXECUTIVE SUMMARY

The Bonneville Power Administration (BPA) proposes to fund activities that would restore sufficient water flows to Salmon Creek and rehabilitate its streambed as necessary to provide adequate passage for summer steelhead (*Oncorhynchus mykiss*) and possibly spring chinook (*O. tshawytscha*). The Upper Columbia River steelhead Evolutionarily Significant Unit (ESU) is listed as endangered under the Endangered Species Act (ESA). While an Upper Columbia River spring chinook ESU has also been listed, the Okanogan River and its tributaries were not included as part of this ESU because spring chinook are considered to be extirpated (locally extinct) from this watershed.

Both steelhead and spring chinook are known to have historically occurred in Salmon Creek. However, habitat for these species in Salmon Creek was greatly affected in the early 1900s by the construction of two dams: Conconully Dam, constructed by the U.S. Bureau of Reclamation (BOR) on the upper reaches of Salmon Creek in 1910, and the Okanogan Irrigation District (OID) diversion dam on the lower reaches of Salmon Creek in 1916. Since these facilities were constructed, the lower 4.3 miles of Salmon Creek downstream from the OID diversion dam has been (and continues to be) typically dewatered under normal irrigation operations, except during high runoff years that result in uncontrolled spill at the reservoirs and diversion dam. In addition, channel geometry, streambank stability, and riparian and aquatic habitat values of the lower 4.3 miles of Salmon Creek have been adversely affected in the last 80 years by a variety of conditions, including altered streamflow regimes, adjacent land uses that have altered vegetation and sediment production, and direct manipulation of streambanks and riparian vegetation.

These conditions have significantly degraded the lower 4.3 miles of Salmon Creek and deposited substantial sediments at the mouth of the creek, which has largely precluded fish migration into Salmon Creek from the Okanogan River. Summer steelhead now rarely use Salmon Creek, although this species is occasionally observed in the creek during high water years, and WDFW has been stocking the creek with steelhead hatchery smolts for several years.

UNDERLYING NEED FOR ACTION

The OID is the prime user of water in Salmon Creek for the irrigation of 5031 acres of agriculture land owned by its 617 members and has a keen interest in protecting its withdrawal water right in Salmon Creek. The District also recognizes that the listing of the Upper Columbia River ESU summer steelhead as endangered under the ESA by NOAA Fisheries created an obligation to comply with the ESA. The OID has a need to investigate opportunities to enhance or restore summer steelhead runs while retaining and protecting its existing water rights to assure viable District operations. The Colville Confederated Tribe's (CCT) interest in pursuing restoration of anadromous fish runs in the Okanogan and Columbia Rivers has given rise to a unique opportunity for the CCT and OID to pursue a joint study of this project. A cooperative approach will help to avoid expensive litigation over ESA compliance.

BPA's need for action arises primarily from its statutory obligations. BPA is responsible for protecting and conserving listed threatened and endangered species under the ESA of 1973, as amended. By funding a project that would increase endangered summer steelhead use of Salmon Creek, the proposed project would assist BPA in fulfilling its responsibilities under the ESA.

The proposed action also is needed to allow BPA to meet its obligations under the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act) as managed by the Northwest Power and Conservation Council (Council). This project was proposed to the Council by a partnership between the CCT and OID. BPA's funding of this project would assist BPA in meeting its need to take the Council's program into account to the fullest extent practicable. In addition, the Northwest Power Act requires BPA to undertake its mitigation and enhancement responsibilities in a manner that provides "equitable treatment" for fish with the other purposes for which the system is operated.

BPA recognizes that a trust responsibility derives from the historical relationship between the Federal government and the Tribes as expressed in Treaties, statutes, Executive Orders, and Federal Indian case law. BPA and the CCT will work cooperatively to arrive at an understanding of how the trust responsibility applies to the proposed actions.

PURPOSES

BPA has identified the following purposes (i.e., goals or objectives) for the proposed action:

- Provide adequate passage in Salmon Creek for summer steelhead.
- Protect the ability of the OID to provide water delivery to its users.
- Maximize efficiency in water use.
- Achieve administrative efficiency and cost-effectiveness.
- Avoid or minimize adverse environmental impacts.
- Achieve local community and landowner acceptance and support.

AGENCY ROLES AND DECISIONS TO BE MADE

BPA would be a potential funding source for portions of the proposed project. BPA is acting as the lead agency under the National Environmental Policy Act (NEPA) for this Environmental Impact Statement (EIS). Once the final EIS (FEIS) is completed, BPA must decide whether or not to fund activities related to the proposed project. BPA has not decided on a preferred alternative at this time.

The U.S. Department of the Interior, Bureau of Reclamation (BOR) constructed and owns all of the water storage facilities in the Salmon Creek watershed. BOR is not a lead agency under NEPA for this EIS, but it could make a decision and issue its own Record of Decision (ROD) based on the FEIS for the project. BOR is a potential source of funding for portions of the project. BOR therefore is acting as a cooperating agency under NEPA.

The Washington State Department of Ecology (Ecology) is responsible for management of water rights within the State of Washington. If the need for a decision related to water rights results from the proposed project, Ecology would have to ensure that it meets the requirements of the Washington State Environmental Policy Act (SEPA).

The CCT, in cooperation with the OID, are sponsoring this project proposal. Both parties have contributed to the environmental analysis process and would be the primary organizations seeking funding to implement any decisions that are made. The OID would be the primary organization that would operate and maintain any new facilities integrated into the irrigation district infrastructure or implement any new actions affecting distribution of water within the district, but would not be responsible for any operations or maintenance costs over and above their current Okanogan River pumping budget associated with new facilities or actions.

SCOPING AND IDENTIFICATION OF ISSUES

For this project, the public scoping process began with a Notice of Intent to prepare a NEPA EIS that was published in the Federal Register on February 4, 2002. The close of the comment period was March 8, 2002. Several hundred public notice letters were mailed in early February 2002 to the people and organizations that may be interested or impacted by this project proposal.

Public and agency scoping meetings were held in Okanogan, Washington on February 21, 2002 and in Wenatchee, Washington on February 22, 2002. These were "open forum" meetings to encourage participation and dialogue with the attendees. Approximately 75 people attended the public scoping meeting on February 21, and 15-20 agency representatives attended the agency scoping meeting on February 22.

In addition to these scoping meetings, many informal meetings that included presentations and solicitation of issues and comments were held with local, state, and federal agencies, landowners, irrigators, and other members of the public. The majority of the public comments received were questions regarding water resources, impacts to the economy, and the need for the project. Some public comments were supportive, noting the potential for positive impacts to recreation and the economy if local labor pools are used to implement the project. Concerns were expressed with regard to the cost of the project and any increases in assessments for property owners and irrigators. Water rights and property rights were also major concerns.

Agency scoping comments also included water rights, and technical questions regarding the design and the process. Agencies such as Ecology, Washington Dept. of Fish and Wildlife (WDFW) and the Environmental Protection Agency (EPA) provided comments toward the project.

The Council sponsored two separate reviews of the project through its advisory panels. The issues raised by the Independent Scientific Review Panel, in its most recent review of the Salmon Creek Project for the Council in March 2002, were also raised during scoping and are addressed in this draft EIS (DEIS).

ALTERNATIVES

Three action alternatives were developed for the DEIS based upon three methods considered for improving fish passage: 1) increasing stream flows in lower Salmon Creek, 2) improving the lower Salmon Creek stream channel, and 3) improving the Salmon Lake feeder canal. Alternative 4 is the No Action alternative, under which BPA would not fund any activities related to the proposed project.

To increase stream flows, Alternatives 1 and 2 consider options that would allow the OID to use more water from the Okanogan River rather than Salmon Creek and thus allow flows[1] to be retained in Salmon Creek. Alternative 1 involves construction of a new pump station along the west bank of the Okanogan River to substitute Okanogan River water for Salmon Creek water used in irrigation. Alternative 2 evaluates upgrading the existing OID Shellrock pumping plant along the Okanogan River to allow the OID to withdraw more water from the Okanogan River. Under this alternative, OID would convert the Shellrock facility from supplementary use to serve as its primary source. Alternative 3 presents a proposal to purchase water rights from the Okanogan Irrigation District in order to maintain water in Salmon Creek.

To improve the lower Salmon Creek stream channel, Alternative 1 would remove the gravel bar at the mouth of the creek. Alternative 2 includes full rehabilitation of the lower 4.15 miles of Salmon Creek, with complete reconstruction of the channel along 0.25 miles.[2] Alternative 3 does not include channel rehabilitation.

All three action alternatives include improvements to the feeder canal and headgate that delivers water from the North Fork of Salmon Creek to Salmon Lake.

Alternative 1 is the preferred alternative of the OID and CCT. This alternative would implement the following actions to allow Salmon Creek streamflows to remain in the creek and improve anadromous fish passage:

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[1] Flow requirements for salmon and steelhead are expressed in cubic feet per second (cfs). Salmon engage in different activities in each season (e.g., spawning, rearing, wintering, and migration), and these life stages or activities require different amounts and timing of flows. Aggregating these flows over the course of a year yields a total volume of water (expressed in acre-feet) needed to meet life history requirements. The term “flow” is used in discussing the specific instream flow needed at a particular point in time (cfs), and “flow volume” is used in referring to the aggregate amount of water required.

[2] The proposed rehabilitation described under alternative 2 has been developed from initial concepts presented in the *Conceptual Rehabilitation Plan for Lower Salmon Creek, Washington* (ENTRIX 2002)

- Construction of a new 80 cfs pump station for the OID utilizing water from the Okanogan River, including construction of approximately 2 miles of new pipeline from the new pump station to the OID main canal.
- Replace the Salmon Lake feeder canal and headgate with a combination of buried pipeline and embedded pipeline in the canal to increase flow capability from 30 cfs to 90 cfs.
- Remove the alluvial fan at the mouth of Salmon Creek, which is impeding fish passage. Approximately 530 feet of the channel would be excavated. Excavation of the gravel and cobble deposits would require an excavator and/or backhoe within the dry channel and off road dump trucks to transport excavated sediment to an adjacent staging area.

Alternative 2 would implement the following actions to allow Salmon Creek streamflows to remain in the creek and improve anadromous fish passage:

- Upgrade the existing OID Shellrock pumping plant to allow more water to be pumped from the Okanogan River. There are options on the sizing of new pumps dependent on further design of the upgrade.
- Build a new pipeline from Shellrock to a sediment basin in the main canal to lessen the amount of sediment delivered in the water to Diversion 4 users.
- Replace the Salmon Lake feeder canal and headgate with a combination of buried pipeline and embedded pipeline in the canal to increase flow capability from 30 cfs to 90 cfs.
- Stream rehabilitation in the lower 4.3 miles of Salmon Creek, including a combination of site-specific treatment of eroding stream banks, constructing a low-flow channel, floodplain reconnection, and reestablishing riparian vegetation. Full channel rehabilitation would modify the lower channel shape and size and decrease the minimum streamflow required for adequate fish passage.

Alternative 3 would involve:

- Purchase 5100 acre-feet of OID water rights for Salmon Creek to allow the water that is subject to these rights to remain in Salmon Creek.
- Replace the Salmon Lake feeder canal and headgate with a combination of buried pipeline and embedded pipeline in the canal to increase flow capability from 30 cfs to 90 cfs.
- No rehabilitation of the lower 4.3 miles of Salmon Creek.

Alternative 4 is the No Action Alternative. Under the No Action Alternative:

- No flows would be provided for steelhead or chinook passage in lower Salmon Creek. The lower creek would continue to be dewatered in most years, and OID would continue to divert its irrigation water supply under existing water claims from its existing diversion dam

at RM 4.3 on Salmon Creek, supplemented in dry years by pumping from the Okanogan River at Shellrock.

- The Lower Salmon Creek channel would not be rehabilitated and neither steelhead nor chinook salmon would be able to pass through the lower 4.3 miles of Salmon Creek in most years to reach the high quality habitat in middle reach of Salmon Creek. No additional infrastructure improvements, including the Salmon Lake feeder canal are expected to be undertaken.

All of the action alternatives would meet the primary goals of providing necessary stream flows for fish and protecting the irrigation district's ability to provide water to users. Alternative 1 would provide the most water for irrigation at approximately 16,165 acre-feet. Alternative 2 would provide 14,425 - 15,225 acre-feet, and Alternative 3 would provide 9,972 – 10,679 acre-feet. Although Alternative 1 is the OID and CCT's preferred alternative, they would like the size of the pump station to be re-evaluated to determine whether a smaller station at a smaller cost would provide the needed amount of water.

Alternatives 1 and 2 would exchange water from the Okanogan River for water to be left in Salmon Creek. This would decrease Okanogan River stream flows below the respective pump stations down to the confluence with Salmon Creek. Shellrock is located further upstream than the proposed location for the new pump. There would be slightly increased chance of not meeting WAC minimum flows in the Okanogan River, which could potentially impact some water rights holders in that stretch of the Okanogan River between the pump and the confluence with Salmon Creek.

The median lake levels in Conconully Reservoir and Salmon Lake would be higher in all three action-alternatives, with Alternative 1 providing the biggest boost to minimum and median lake levels. Alternative 2 would maintain the median level of the lakes at a higher level, but the minimum lake elevation would be lower between February and June. Alternative 3 would provide a slight boost in median and minimum lake levels.

Increased flows in lower Salmon Creek would provide a source of cool water entering the Okanogan River, providing refugia in the Okanogan River near the mouth of the creek for fish migrating upstream during the warm summer months. Alternative 2 provides the best passage and habitat for fish in the long term, largely due to the stream rehabilitation component.

Alternative 2 would create the highest amount of short-term environmental impact, mostly because of construction that would be needed for stream rehabilitation. Both alternatives 1 and 2 would require the construction of a pipeline, a sediment pond, and the feeder canal. Alternative 1 would have a larger construction footprint at the site of the pump station, however, the overall amount of ground disturbance would be highest for Alternative 2. Alternative 3 would have a relatively low amount of ground disturbance. The amount of potential impact to riparian vegetation and wetlands is highest in the short term for Alternative 2. However, in the long-term, Alternative 2 would end up with an increased amount of riparian vegetation and wetland areas if the rehabilitation were successful. Directly correlated with impacts to the ground and vegetation are impacts to wildlife, cultural resources, visual quality, and water quality.

Alternative 3 would have the least cost in the short term to meet desired goals for fish passage. However, the loss of revenue to the county would be over $4 million per year. Approximately 1,460 acres of farmland would revert back to non-irrigated uses. Alternatives 1 and 2 would require substantial investment to provide the needed water for fish passage, but would have no impact on county farmlands and revenues. It is not known what the cost would be of choosing the No Action Alternative, as there is an unknown cost associated with any future requirement to provide passage for endangered or threatened fish under the Endangered Species Act. There would be a requirement for the public sector to cover any additional costs associated with extra pumping needed for Alternatives 1, 2, or 3.

Tables 2-10 and 2-11 at the end of Chapter 2 provide a complete comparison of the potential impacts and mitigation measures of the various alternatives and the outcomes that each of the alternatives would have towards the stated purposes for this project.